

# CORE LOG

U. S. GEOLOGICAL SURVEY

DRILL HOLE USGS CORE #3 A

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LOCATION NW 1/4, SW 1/4, Sec. 26, T. 2 S., R. 95 W. ELEVATION 7040' TOTAL DEPTH 306.6'

DATE BEGUN 6/9/78 DATE COMPLETED 6/11/78 DRILLER McCabe LOGGED BY Kurt Hollocher

CASING 4/6' (pulled) REMARKS: tuffs noted where >0.05' thick

FROM	TO	THICK- NESS	LITHOLOGIC DESCRIPTION	Drillers log 1st core bottom
23.4	27.8	4.4	Lean medium gray partly weathered oil shale, upper part thinly bedded with dips of up to 50°, lower part highly turbated and folded. Tuff 0.2' thick at 27.5' to 27.7'	? - 27.8' Maybe float
27.8'	33.1'	5.3	Broken up rock, drilled out	? - 46.4
33.1	-40.2	7.1	Gray brown medium rich oil shale, highly tuffaceous with contorted and steeply dipping bedding up to 50° ripple marks in lower foot.	
40.2	50.9	Dark	brownish gray oil shale, highly tuffaceous with horizontal but somewhat disturbed bedding. Thick discrete tuffs: 40.2-40.5', 0.3' thick; 42.0' - 42.9', 0.9' thick; 43.0-43.3', 0.3' thick; 49.4' 49.7', 0.3' thick; 46.4' - 47.25 lost at top of 3rd core	46.4-62.10 14.85 measured
50.9	76.2		Gray brown moderately lean oil shale, less tuffaceous than above units. Even, horizontal, but turbated bedding tuff 0.05' at 53.8'; tuff 0.05' at 56.6'	62.10-64.55 2.45' measured
			Rich brown oil shale from 56.8' - 59.7'	
76.2	79.1		Dark brownish gray moderately rich oil shale, interbedded with minor tuff. Tuff 0.05' thick at 77.4'	63.10 - 77.7' 14.6
79.1	115.1		Same as interval 50.9-76.2' - tuff 0.05' thick at 88.1'	77.7' - 93.4' 15.7

Drill hole

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LOCATION NM 1/4 SW 1/4 sec. 26, T. 2 S., R. 95 W.

ELEVATION 7040

TOTAL DEPTH 306.6

DATE BEGUN 6/9/78 DATE COMPLETED 6/11/78

LOGGED BY Kurt Hollocher

CASING 46

REMARKS:

FROM	TO	THICK- NESS	LITHOLOGIC DESCRIPTION
115.1	117.0		Rich oil shale with tuff, thinly bedded, little turbation tuff 0.05' thick at 118.1. Some leaner oil shale mixed in.
117.0			Same as interval 50.9-76.2'. Tuff 0.05' thick at 119.2; Rich oil shale
			dark brown 0.1' thick at 132.7'; rich oil shale 132.3-133.6 interbedded with moderately rich oil shale and tuff. Tuff 0.05' thick at 135.0'. Rich oil shale 143.6'-144.4' with tuff.
150.7-	151.5		Rich dark brown thinly bedded oil shale.
151.5	156.4		Medium rich oil shale thinly bedded with moderate turbation. Tuff 0.05' thick at 153.3'. Tuff, turbated 0.05' thick at 154.2'. Tuff turbated 0.05' thick at 156.0'.
156.4	170.2		Same as interval 50.9'-76.2' medium grade oil shale. Tuff with minor oil shale 0.1' thick at 158.3'. Tuff with minor oil shale 0.4' thick 159.8-160.2'. Tuff, turbated 0.05' thick at 160.9', Tuff 0.5' thick at 164.6' and 164.7' and 165.9' and 168.3' and 170.2'.
170.2	171.7		Dark brown rich oil shale with abundant tuff. Tuff 0.15' thick at 170.9-171.05' 160'-164' stem
171.7	191.3		Medium rich oil shale, thinly bedded with little turbation. Tuffs common 179.3-179.5; tuff 0.1' thick at 181.2; tuff 0.1' thick at 181.3; tuff 0.2' thick at 185.0-185.2; tuff 0.3' thick at 187.3-187.6.

in hole

broken up by drill

Drill hole

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ELEVATION 7040 TOTAL DEPTH 306.6'

DATE BEGUN 6/9/78 DATE COMPLETED 6/11/78 DRILLER McCabe

LOGGED BY Kurt Hollocher

CASING 46' pulled REMARKS:

FROM	TO	THICK- NESS	LITHOLOGIC DESCRIPTION	
191.3	192.5		Rich dark brown oil shale interbedded with pink and gray tuff. Tuff 0.05' thick at 192.2'	
192.5	208.1		Medium rich brown to gray brown oil shale, thinly bedded with little turbation. Tuffs very common. Tuff 0.07' thick at 195.3; tuff with minor oil shale 0.2' thick at 196.1-196.3. Tuff 0.06' thick at 196.9'; tuff 0.05' thick at 197.5; tuff 0.05' thick at 197.6; Tuff 0.15' thick from 198.0-198.15; tuff 0.05' thick at 198.3; tuff 0.05' thick at 198.4; tuff 0.05' thick at 198.5; tuff 0.1' thick at 199.0; tuff 0.2' thick at 199.2'-199.4'; rich oil shale, dark brown interbedded with tuff 204.2'-205.5'. Tuff 0.15' thick 205.05-205.2; tuff 0.06' thick at 207.0; thick tuff with minor oil shale toward top 0.8' thick from 207.3-208.1'	
208.1	217.1		Dark brown rich oil shale thinly bedded with little turbation. Tuff 0.05' thick at 212.7' tuff 0.07' thick at 213.5'; tuff 0.05' thick at 215.5'; tuff 0.08' thick at 216.3; tuff 0.1' thick at 217.0.	
217.1			Brown, dark gray brown, moderately rich oil shale with turbation in parts. Horizontal thin bedding with abundant tuff. Tuff 0.05' thick at 217.6; tuff 0.1' thick at 218.8'; tuff 0.2' thick at 219.1-219.3'; tuff 0.4' thick at 220.6-220.9'; Turbated tuff 0.1' thick at 227.0' tuff 0.07' thick at 230.0'; turbated tuff 0.2' thick at 230.8-231.0; tuff 0.15' thick at 231.2-231.35; tuff 0.08' thick at 232.3'; tuff 0.08' thick at 232.8'; tuff 0.06' thick at 232.9'; tuff 0.1' thick at 233.4'; tuff 0.15' thick at 233.5 to 233.65'; tuff 0.05' thick at 233.7; tuff 0.09' at 234.0; tuff 0.07 thick at 234.5; tuff 0.05' thick at 234.9'; tuff 0.08'	

Drill hole

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LOCATION NW 1/4 SW 1/4, sec. 26, T. 2 S., R. 95 W. ELEVATION 27040 TOTAL DEPTH 306.6'  
DATE BEGUN 6/9/78 DATE COMPLETED 6/11/78 DRILLER McCabe LOGGED BY Kurt Hollocher  
CASING 46' REMARKS: \_\_\_\_\_

Drill hole.

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ELEVATION 5 7040 TOTAL DEPTH 306.6

LOGGED BY Kurt Holllocker

REMARKS:

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Drill hole.